



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,791	07/03/2003	Jiang Hsieh	15-CT	1516

7590 07/11/2007
Patrick W. Rashe
Armstrong Teasdale LLP
One Metropolitan Square, Suite 2600
St. Louis, MO 63102

EXAMINER

ARTMAN, THOMAS R

ART UNIT	PAPER NUMBER
----------	--------------

2882

MAIL DATE	DELIVERY MODE
-----------	---------------

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/613,791	Applicant(s) HSIEH ET AL.	
	Examiner Thomas R. Artman	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☒ Claim(s) 22,23,28 and 29 is/are rejected.
- 7) ☒ Claim(s) 24-27 and 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|---|--|

DETAILED ACTION

Oath/Declaration

The reissue oath/declaration filed with this application is defective because none of the errors which are relied upon to support the reissue application are errors upon which a reissue can be based. See 37 CFR 1.175(a)(1) and MPEP § 1414.

The declaration filed June 14th, 2007, indicate errors in dependent patent claim 9. These errors do not affect the scope of the patented invention because only independent claims (specifically, claims 1, 12 and 22) define the scope of the invention. Therefore, these cited errors are not errors that can support a reissue application.

Claim Rejections - 35 USC § 251

Claims 1-32 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 22 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Stergiopoulos (US 6,236,705 B1).

Regarding claim 22, Stergiopoulos discloses a method, including:

- a) imaging a heart 1 at a first phase of a cardiac cycle to obtain a first image,
 - b) imaging the heart at a second phase of the cardiac cycle to obtain a second image,
- where the second phase is different from the first phase, and further where the first and second images are obtained at the same physical location in a single scan (Abstract; see also Fig.2),
- c) determining a difference image using the first and second images (col.10, line 46 through col.11, line 22), and
 - d) performing calcification scoring based on the difference image (col.9, lines 33-55).

With respect to claim 28, Stergiopoulos further discloses the step of processing the difference image to enhance appearance of calcification deposits (col.9, lines 33-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stergiopoulos, as applied to claim 22 above.

Stergiopoulos does not specifically disclose the practice of having the patient hold their breath during the imaging procedure.

However, it is known in the art to have the patient hold their breath during heart imaging procedures in order to remove movement artifacts caused by the lungs. This allows the image subtraction to be useful, since the stationary structures will properly cancel out, and only movement caused by the heart will remain.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Stergiopoulos to have the patient hold their breath during the imaging procedure in order to improve the difference image results by removing movement artifacts caused by respiratory motion.

Art Unit: 2882

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stergiopoulos, as applied to claim 22 above, in view of Meno (US 4,716,904).

Stergiopoulos does not specifically disclose monitoring an ECG signal.

Meno specifically teaches the practice of monitoring an ECG signal (physiological monitor 22 of the heart 8) in order to take images at desired phases of the heart (col.3, line 52 through col.4, line 7; col.5, lines 20-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Stergiopoulos to monitor an ECG signal in order to take images at desired phases of the heart, as taught by Meno.

Allowable Subject Matter

Claims 1-21 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: claims 1 and 12 are allowed for reasons as stated in the previous Office action, dated August 3rd, 2006.

Claims 24-27 and 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, for reasons as stated in the previous Office action, dated August 3rd, 2006.

Response to Arguments

Applicant's arguments with respect to claim 22 have been considered but are moot in view of the new ground(s) of rejection.

However, the examiner wishes to clarify the above issues with respect to the defective declaration.

First, independent claim 22 has been broadened by the present amendment. Therefore, the scope of the invention has broadened, and the limitations that were removed must be identified in the declaration as errors.

Second, claim 9 is a dependent claim, which does not affect the scope of the invention. The amendment to claim 9, by itself, does not support a reissue application. The basis for support of a reissue application is a change in scope of the invention, meaning, a change in scope of one or more independent claims.

However, since claim 9 is a patent claim, then any amendment to the claim must be identified as an error in the declaration.

In conclusion, the declaration must indicate the limitations removed from independent claim 22 that are believed to be errors. The declaration must also indicate the limitations removed/changed in dependent claim 9 that are believed to be errors since claim 9 is a patent claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Flohr (US 6,381,487 B1) teaches monitoring heart phase using an ECG device and correlating CT images based upon the ECG data.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

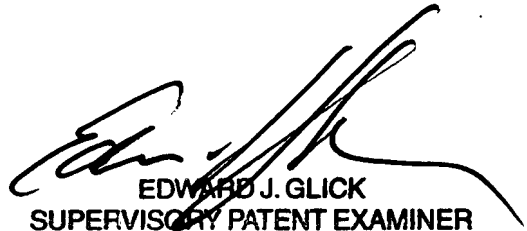
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485. The examiner can normally be reached on 9am - 5:30pm Monday - Friday.

Art Unit: 2882

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas R. Artman
Patent Examiner



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER